

Status and/or Amendments of the Claims:

Claims 1-3 (Cancelled – allowed in parent application)

4. (Currently Amended) A method for treating interproximal and subgingival sites in the oral cavity with a coated monofilament dental tape comprising flossing said sites with a coated monofilament dental tape having a substantive coating, wherein said coating:

contains a crystal control substance,

is saliva soluble,

is substantially crystal-free,

comprises from between about 20% and about 120% by weight of said tape, and has a flake value of less than about 20 and a release value of about 90 to 100.

5. (Currently Amended) ~~A method for treating interproximal and subgingival sites in the oral cavity according to~~ The method of Claim 4, wherein said tape coating further comprises ~~contains~~ an active ingredient selected from the group consisting of stannous fluoride, potassium nitrate, triclosan, chlorhexidine, cetylpyridinium chloride, domaphen bromide, metronidazole, doxycycline, aspirin, other non-steroidal anti-inflammatory drugs and mixtures thereof.

6. (Currently Amended) A method for treating interproximal and subgingival sites in the oral cavity ~~according to Claim 4~~, for the purposes of mitigating, curing or otherwise affecting systemic diseases which are caused or exacerbated by poor oral health such as heart disease, diabetes, tobacco-use related disease, low-birth weight babies, immuno-compromised patients, said method comprising flossing said sites with a coated monofilament dental tape having a substantive coating, wherein said coating contains an active ingredient

selected from the group consisting of stannous fluoride, potassium nitrate, triclosan, chlorhexidine, ~~eetyl-pyridinium~~ cetylpyridinium chloride, domaphen bromide, metronidazole, doxycycline, aspirin, other non-steroidal anti-inflammatory drugs (NSAIDS) and mixtures thereof.

7. (Currently Amended) A method for physically removing subgingival biofilms from interproximal and subgingival sites in the oral cavity with a coated monofilament dental tape comprising flossing said sites with a coated monofilament dental tape having a substantive coating, wherein said coating:

contains a crystal control substance

is saliva soluble

is substantially crystal-free

comprises from between about 20% and about 120% by weight of said tape has a flake value of less than about 20 and a release value of about 90 to 100.

Claims 8-12 (Cancelled – allowed in parent application)

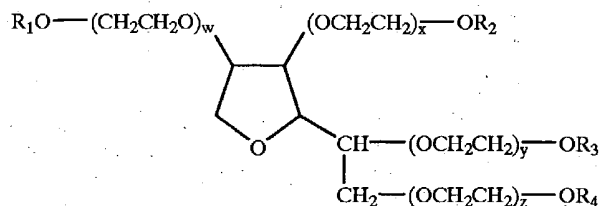
13. (New) A substantive coating for monofilament dental tape comprising:

at least one crystal control substance; and

an effective amount of at least one biologically active ingredient, wherein the coating is saliva-soluble and comprises between about 20% and about 120% by weight of the tape and has a flake value of less than about 20 and a release value of about 90 to 100.

14. (New) The substantive coating for monofilament dental tape of claim 13, wherein the crystal control substance is selected from the group consisting of long chain fatty alcohols or mixtures thereof and liquid

surfactants having the standard formula:



wherein R₁ to R₄ represent H or aliphatic acyl groups having from 10 to 30 carbon atoms.

15. (New) The substantive coating for monofilament dental tape of claim 14, wherein the sum of w, x, y, and z is from between about 20 and about 80.

16. (New) The substantive coating for monofilament dental tape of claim 13, wherein the crystal control substance is selected from the group consisting of TWEEN® 80, SPAN 60®, EMSORB® 2726, and POLOXAMER 407.

17. (New) The substantive coating for monofilament dental tape of claim 13, wherein the crystal control substance comprises an esterified, PEG-based surfactant.

18. (New) The substantive coating for monofilament dental tape of claim 13, wherein the crystal control substance is a polyethylene glycol sorbitan dialiphatic ester.

19. (New) The substantive coating for monofilament dental tape of claim 14, wherein the long chain fatty alcohol has the standard formula:

R-OH

wherein R represents a long chain alkyl group having from 10 to 30 carbon atoms.

20. (New) The substantive coating for monofilament dental tape of claim 14, wherein the long chain fatty alcohol is selected from the group consisting of 1-tetradecanol, 1-eicosanol, 1-octacosanol, 1-pentadecanol, 1-heneicosanol, 1-nonacosanol, 1-hexadecanol, 1-tricosanol, 1-triacontanol, and 1-tetracosanol.

21. (New) The substantive coating for monofilament dental tape of claim 14, wherein the long chain fatty alcohol is present in its natural isomeric form.

22. (New) The substantive coating for monofilament dental tape of claim 13, wherein the at least one biologically active ingredient is selected from the group consisting of antimicrobial, anti-tartar, anti-plaque, whitening, cleaning, desensitizing, antibiotic, anti-inflammatory, anti-gingivitis ingredients, prostaglandin (PGE₂), and C-reactive protein control substances.

23. (New) The substantive coating for monofilament dental tape of claim 22, wherein the antimicrobial substance is selected from the group consisting of chlorhexidine, cetylpyridinium chloride, domaphen bromide, triclosan, metronidazole, and mixtures thereof.

24. (New) The substantive coating for monofilament dental tape of claim 22, wherein the anti-plaque substance is selected from the group consisting of MICRODENT® and ULTRAMULSION™.

25. (New) The substantive coating for monofilament dental tape of claim 13, further comprising a wax.

26. (New) The substantive coating for monofilament dental tape of claim 25, wherein the wax is selected from the group consisting of paraffin waxes, microcrystalline waxes, petroleum waxes, and natural waxes.

27. (New) The substantive coating for monofilament dental tape of claim 25, wherein the wax is substantially solid at room temperature and comprises a C₁₆ to C₅₀ hydrocarbon.

28. (New) The substantive coating for monofilament dental tape of claim 13, further comprising a sweetening agent.

29. (New) The substantive coating for monofilament dental tape of claim 28, wherein the sweetener comprises saccharin.

30. (New) The substantive coating for monofilament dental tape of claim 13, further comprising a flavoring agent.

31. (New) The substantive coating for monofilament dental tape of claim 30, wherein the flavoring agent is spicemint flavored or vanilla mint flavored.

32. (New) The substantive coating for monofilament dental tape of claim 13, further comprising an abrasive agent.

33. (New) Monofilament dental tape coated with a substantive coating, the coating comprising:

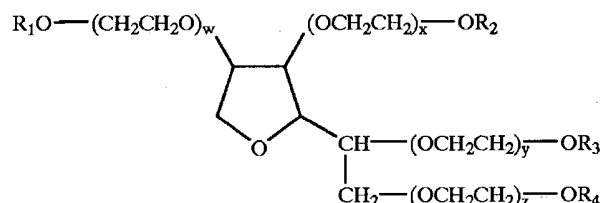
at least one crystal control substance; and

an effective amount of at least one biologically active ingredient, wherein the coating is saliva-soluble and comprises between about 20% and about 120% by weight of the tape and has a flake value of less than about 20 and a release value of about 90 to 100.

34. (New) The coated monofilament dental tape of claim 33, wherein the monofilament dental tape comprises an elastomer, TEFLON®, a bicomponent, or a polymer.

35. (New) The coated monofilament dental tape of claim 33, wherein the monofilament dental tape is shred-resistant.

36. (New) The coated monofilament dental tape of claim 33, wherein the crystal control substance is selected from the group consisting of long chain fatty alcohols or mixtures thereof and liquid surfactants having the standard formula:



wherein R₁ to R₄ represent H or aliphatic acyl groups having from 10 to 30 carbon atoms and the sum of w, x, y, and z is from between about 20 and about 80.

37. (New) The coated monofilament dental tape of claim 33, wherein the long chain fatty alcohol has the standard formula:



wherein R represents a long chain alkyl group having from 10 to 30 carbon atoms.

38. (New) The coated monofilament dental tape of claim 33, wherein the at least one biologically active ingredient is selected from the group consisting of antimicrobial, anti-tartar, anti-plaque, whitening, cleaning, desensitizing, antibiotic, anti-inflammatory, anti-gingivitis ingredients, prostaglandin (PGE₂), and C-reactive protein control substances.

39. (New) The coated monofilament dental tape of claim 38, wherein the antimicrobial substance is selected from the group consisting of chlorhexidine, cetylpyridinium chloride, domaphen bromide, triclosan, metronidazole, and mixtures thereof.

40. (New) The coated monofilament dental tape of claim 33, wherein the coating further comprises a wax selected from the group consisting of paraffin waxes, microcrystalline waxes, petroleum waxes, and natural waxes.

41. (New) The coated monofilament dental tape of claim 33, further comprising a sweetening agent.

42. (New) The coated monofilament dental tape of claim 33, further comprising a flavoring agent.

43. (New) The coated monofilament dental tape of claim 33, further comprising an abrasive agent.

44. (New) The coated monofilament dental tape of claim 33, wherein the coating exhibits minimum cracking, fracturing, and flaking when physically

removing biofilms from interproximal and subgingival surfaces.

45. (New) The coated monofilament dental tape of claim 33, wherein the at least one biologically active ingredient is releasable upon working into and physically removing biofilms from interproximal and subgingival spaces.

46. (New) The coated monofilament dental tape of claim 33, wherein the coating is substantially crystal-free.

47. (New) A method of manufacturing a coated monofilament dental tape having a substantive coating comprising at least one crystal control substance and an effective amount of at least one biologically active ingredient, wherein the coating is saliva-soluble and comprises between about 20% and about 120% by weight of the tape and has a flake value of less than about 20 and a release value of about 90 to 100, the method comprising the steps of:

- a. introducing the tape to a loading means containing the coating which is fluid and maintained substantially uniform, while being held at a temperature above the melting temperature of the coating;
- b. removing excess coating from the tape by doctoring or calendering the excess coating off the coated tape after coating, and
- c. cooling the coated tape and winding the same onto master spools prior to bobbin winding.

48. (New) The method for treating interproximal and subgingival sites in the oral cavity with the coated monofilament dental tape according to claim 5, wherein the active ingredient is delivered interproximally and subgingivally upon flossing.